

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

**Claim 1 (Currently amended):** A microwave heating apparatus for radiating a microwave oscillated from a magnetron to a heating chamber via a waveguide,

wherein an electricity feeding port for radiating the microwave is provided at a ceiling wall of the heating chamber, and

the wave guide is formed in an L-like shape including a side waveguide extended upwardly along an outer side face of the heating chamber such that the side waveguide is in direct contact with the outer side face of the heating chamber and an upper waveguide extended from an upper end of the side wave guide to the electricity feeding port along an outer face of the ceiling wall,

wherein a plurality of pieces of the electricity feeding ports are provided,

wherein the plurality of electricity feeding ports are formed by at least two or more kinds of electricity feeding ports having different shapes and opening areas,

wherein when the plurality of electricity feeding ports are aligned in a front and rear direction of the ceiling wall, the opening area of the electricity feeding port at a position proximate to a center of the ceiling wall is set to be larger than the opening area of the electricity feeding port at a position remote from the center of the ceiling wall,

wherein a heating member in a linear shape for heating by a heater is mounted in a recessed portion of the ceiling wall of the heating chamber and the electricity feeding ports are mounted to the ceiling wall, both the heating member and the electricity feeding ports being mounted at a position away from a line equally dividing the ceiling wall into two in a front and rear direction, and

wherein a distance between the center of the opening area of the electricity feeding port and an antenna of the magnetron is  $\lambda_g/2$  multiplied by an integer, wherein  $\lambda_g$  is a wavelength of the microwave propagated at an inside of the L-shaped wave guide

wherein a width of the waveguide is greater than  $\lambda_0/2$  and less than  $\lambda_0$  and the height of the waveguide is less than  $\lambda_0/2$ , wherein  $\lambda_0$  is a wavelength of the microwave in a free space.

**Claim 2 (Previously presented):** The microwave heating apparatus according to Claim 1, wherein the antenna of the magnetron is arranged to be directed to a side of the heating chamber and to be opposed to the side wall and the side wall is formed with a bulged portion bulged to an inner side of the chamber for avoiding interference with the antenna.

**Claim 3 (Original):** The microwave heating apparatus according to Claim 1, wherein the electricity feeding port is formed in a rectangular shape slender in a width direction of the heating chamber.

**Claims 4-7 (Canceled)**

**Claim 8 (Previously presented):** The microwave heating apparatus according to Claim 1, wherein a heating member in a linear shape for heating by a heater is mounted to the ceiling wall of the heating chamber and a center axis of the heating member is constituted to be more proximate to a line equally dividing the ceiling wall into two in a front and rear direction than a center axis line in a width direction of the upper wave guide arranged at the ceiling wall.

**Claim 9 (Original):** The microwave heating apparatus according to Claim 8, wherein the heating member is arranged to be inclined to the line equally dividing the ceiling wall into two in the front and rear direction.

**Claim 10 (Canceled)**

**Claim 11 (Previously presented):** The microwave heating apparatus according to Claim 1, wherein the heating member is positioned such that a horizontal centerline of the heating member is located above the opening areas of the feeding ports.

**Claim 12 (Currently amended):** A microwave heating apparatus for radiating a microwave oscillated from a magnetron to a heating chamber via a waveguide,

wherein an electricity feeding port for radiating the microwave is provided at a ceiling wall of the heating chamber, and

the wave guide is formed in an L-like shape including a side waveguide extended upwardly along an outer side face of the heating chamber and an upper waveguide extended from an upper end of the side wave guide to the electricity feeding port along an outer face of the ceiling wall,

wherein a plurality of pieces of the electricity feeding ports are provided,

wherein the plurality of electricity feeding ports are formed by at least two or more kinds of electricity feeding ports having different shapes and opening areas,

wherein when the plurality of electricity feeding ports are aligned in a front and rear direction of the ceiling wall, the opening area of the electricity feeding port at a position proximate to a center of the ceiling wall is set to be larger than the opening area of the electricity feeding port at a position remote from the center of the ceiling wall, and

~~wherein a distance between the center of the opening area of the electricity feeding port and an antenna of the magnetron is  $\lambda_g/2$  multiplied by an integer, wherein  $\lambda_g$  is a wavelength of the microwave propagated at an inside of the L-shaped wave guide~~

wherein a width of the waveguide is greater than  $\lambda_0/2$  and less than  $\lambda_0$  and the height of the waveguide is less than  $\lambda_0/2$ , wherein  $\lambda_0$  is a wavelength of the microwave in a free space.